Teaching Reading Vocabulary: From Theory to Practice

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Research over the past 20 years has greatly increased our understanding of the role of vocabulary in reading comprehension. However, there is a wide schism between research and practice, and not all research findings or the theories derived from them are of immediate use to the reading teacher. My purpose in this article is to show how I have been able to draw upon research and theory to evolve a consistent and coherent approach to teaching vocabulary in the ESL classroom. I shall first discuss the importance of vocabulary in reading comprehension and then examine some research findings and theories related to vocabulary learning and use. Finally, I shall present some examples of classroom activities in teaching vocabulary that are derived from and consistent with current theories and research.

Importance of Vocabulary in Reading Comprehension

There is no clear evidence to show that there is a direct causal link between vocabulary and success in reading, but the relationship between the two has been strongly suggested in research or theorising by reading experts. Davis (1968) found that the factor that correlated most highly with comprehension is knowledge of word meaning. Daneman (1988) suggests that since words are the building blocks of connected text, constructing text meaning depends, in part, on the success of searching for individual word meanings. Other researchers, such as Beck et al. (1982) and Anderson and Freebody (1981), have also attested to the importance of vocabulary in reading comprehension.

Daneman, however, goes further to suggest that simply improving a reader's vocabulary is not sufficient, for comprehension depends not only on the sheer size of the reader's vocabulary but also on the facility with which s/he can access the known word meanings represented in memory. Such a stand is supported by LaBerge and Samuels (1974), who postulate that fluent readers automatically recognize most of the words they read. It appears that lexical and comprehension processing share the same limited resource, and automatic lexical access frees cognitive space for constructing meaning from the text (see Samuels and Kamil [1988] for a similar argument). In other words, good readers are also good decoders. Such a view is echoed by Eskey (1988:94):

Rapid and accurate decoding of language is important to any kind of reading and especially important to second-language reading. Good readers know the language. They can decode . . . for the most part, not by guessing from context or prior knowledge of the world, but by a kind of automatic identification that requires no conscious cognitive effort. It is precisely this "automaticity" that frees the minds of fluent readers of a language to think about and interpret what they are reading [my emphasis].

Script Theory and Semantic Network

Besides the importance of automaticity of lexical access, research on human memory also has pedagogical implications on vocabulary teaching. It has been postulated that our experience of the world is stored in "scripts" (Schank and Abelson 1977) or schemata (Rumelhart 1980) of related events in the human memory. Thus our knowledge of what goes on in a ship-christening ceremony, for example, will be stored in the human mind in a semantic network of interrelated events, which could look something like the figure below:

Since the various components of a script or schema are arranged in a network of interrelated concepts, and since words are actually labels for concepts (Johnson and Pearson 1984), we can assume that words, too, are stored in semantically related networks. Cornu (1979, cited in Carter 1987), for example, reports that research has shown that individuals tend to recall words according to the semantic fields in which they are conceptually mapped. Henning (1973, cited in White 1988) also finds that advanced students remember words that are stored in semantic clusters, whi1e low-proficiency learners tend to recall words on the basis of their sounds (i.e., in acoustic clusters). Stanovich (1981) refines the idea through his concept of spreading activation in which semantically related forms arranged in a network are activated or made available automatically. In other words, good readers "store" their knowledge of vocabulary in semantically related networks. The activation of a word in a network will automatically "activate" other related words, which will then aid comprehension. I find it useful to regard these activated and interrelated words as "soldiers," all ready to help the reader "attack" a text s/he is reading. Such activated words also help students in making predictions and anticipations about the text they are reading, a view that is in line with current views of reading as a "psycholinguistic guessing game" (Goodman 1976). A simple experiment that teachers could try out in class is to write a word, say, dog, on the board and ask students to spontaneously come up with other words related to it. The possibility of such words as bark, whine, tail, etc., appearing should be obvious.

Johnson and Pearson (1984) suggest three broad categories of basic words necessary for reading comprehension: high-frequency sight words (words that occur so frequently in printed matter that they are essential for fluent reading), selection-critical words (vocabulary items that are absolutely necessary to the understanding of a particular selection), and old words/new meanings (words with multi-meanings). The selection-critical words are especially relevant to the notion of schema-related words.

Pedagogical Implications

The above insights and findings could form the basis of two practical guidelines for the ESL/EFL teacher in the teaching of vocabulary for reading.

1. Automatic recognition of words is vital in reading comprehension. The reading teacher should not be content with merely increasing the size of learners' vocabulary through such activities as explaining or making learners memorize from a mono- or bilingual vocabulary list. Instead, teachers should adopt activities that will help reinforce and recycle vocabulary to

facilitate automatic lexical access. A total language experience in which the skills of reading, writing, listening, and speaking are practiced through a thematic approach seems to be the most efficient way of ensuring lexical repetition and reinforcement.

2. Vocabulary is stored as concepts in scripts that contain semantic networks of interrelated words. Vocabulary building is related to concept building, and teachers should help students organize information or words according to concepts or topics. Activities in the classroom should help learners build up new networks or maintain, refine, and expand existing networks. Reinforcing and refining networks will help to facilitate fluency in lexical access, leading to automaticity in vocabulary recognition. Again, a thematic approach, such as Krashen's Narrow Reading (1981), seems to be the most appropriate activity. As learners read around the same topic, a schema of related concepts, and hence words, is built up and reinforced.

Activities

What follows are some activities that I have found useful in vocabulary development. Each activity is presented with a description of how it is consistent with the idea of semantic network, concept building, and automaticity of lexical access.

Activity 1-Word Prediction
(predicting vocabulary from a given topic)

The teacher writes a topic (for example, "Pollution") on the board, and students predict the words that would be associated with the topic. This activity could be used either as a pre-reading activity or as a game in itself. In the former, the teacher tells the students that they are going to read a passage on, say, "Pollution" and students are to predict the words that may appear in the passage. The teacher writes the words on the board, occasionally asking the students the reason for their choice of words or for the meaning. Students are then given the passage to check their prediction. As a game in itself, the teacher could give the students about 30 seconds to one minute (depending on the proficiency of the students) to generate as many words as possible related to the topic given. Students then compare their words in pairs or as a class, explaining or defending their choice of words. An important element in both activities is that students should be encouraged to explain why they have predicted the words. By explaining their choice of words they are not only refining their understanding of the words but also activating other words in the schema related to the words in question, thus "automatising" their knowledge of lexical co-occurrence.

As a variation, students can be given the title or topic of a reading text and an accompanying list of words. The students then go through the list in pairs or as a class, predicting whether each word would appear in the reading text, giving reasons for their choice. An example is given below:

You are going to read a passage on housing styles and climatic conditions. Before reading it, decide which of the following words you would expect to find in the passage. Compare your list with your partner's, giving reasons for your choice.

materials	shelter
hostile climate	shape
heat	war
dwelling	warm
cold	igloos
drugs	cool
interior	exterior
breezes	positioning
kill	structure
comfort	humid
	pollutes

From experience, I find that this activity, besides its value as a pre-reading activity in activating background knowledge and arousing curiosity, also provides opportunity for purposeful discussion of the words. Vocabulary learning here is seen as a means to an end. The students need to define their understanding of the words before they can decide whether or not to rule out the possible occurrence of those words in the passage.

Activity 2-Word Prediction
(predicting topic from given vocabulary)

This activity is a variation of the first one. The teacher writes down some key words related to a topic and students are asked to predict the topic. Students are asked, for example, to predict the topic from the following words:

wild animals	plants
species	disappear
hunters	shoot and trap
kill	lose their habitat
rare animals	laws
scientists	breed
multiply	parks
conservation	nature
natural parks	plant-research stations

After the students have predicted the topic, they can be asked to predict other words related to it. Again, this activity can be used as a pre-reading activity or as a game in itself. Like the first one,

this activity helps to activate existing words in the students' schema, thereby reinforcing existing semantic networks and facilitating automatic lexical access. Personal experience also shows that students very naturally refer to the dictionary or consult their peers for the meanings of unfamiliar words.

One possible variation to this activity is to reveal the words one by one on a transparency (or to write them down one by one on the board) and ask the students to guess what the topic could be after each word, revising or improving on their guesses as more words are revealed.

Activity 3-The Odd Man Out

This is a frequently used activity in that students have to select the odd word that does not fit into a list, giving reasons for their choice.

E.g.: house dwelling space shelter

It should be pointed out that what is important is not so much the "correct" answer but the discussion on the choice of the answers. (Rivers [1981], in fact, suggests that word lists with more than one possible answer be used to stimulate discussion.) The discussion focuses the students' attention not only on the meaning of the words but also on the relationship among them, thereby increasing their knowledge of collocation and lexical range. Flexibility of answers and pair or group work to facilitate discussion are thus crucial aspects of this activity.

Activity 4-Vocabulary Map

I use this activity as an end-of-unit exercise (each unit could take between one to three weeks) after students have carried out reading, listening, speaking, and writing tasks revolving around a common theme or topic (e.g., "energy"). Students are asked to say aloud any words they can think of or remember related to the topic they have covered in the unit while the instructor writes them on the board. When sufficient words, especially key words related to the topic, have been mentioned, the teacher asks the students to draw a vocabulary map by grouping the words under suitable headings or categories. Students are allowed to add new words not indicated on the board. Again, group work and discussion should be encouraged in this activity. I also find it useful to allow students, as a last resort, to include a "miscellaneous" heading for words that do not seem to "belong" to any category, provided that the list does not become the longest of all! Below are two examples of a vocabulary map prepared by my students working in groups. Note the creative presentation of the first, which is a result of negotiation among the group members.

The practice this activity provides in helping students store words in semantic clusters of interrelated words is obvious. (See Johnson and Pearson [1984] for a detailed discussion of vocabulary maps.)

Activity 5-$20,000 Pyramid Game

This vocabulary game is derived from the popular $20,000 Pyramid Game show on television. I carry out this activity review after several units have been covered. As preparation for the game,

I "collect" key words in two sets of seven words each after each unit. After two units I would have two sets of word lists like the examples on the next page.

The choice of words will depend on the instructor's knowledge of the students (their proficiency, their current command of active and passive vocabulary related to the topic, etc.) and Johnson and Pearson's three categories of basic words. Before the activity, the students are told that they will play a vocabulary game that entails review of some key words related to all the themes/topics that they have covered. The class is then divided into two teams, A and B. The procedure is as follows.

1. One representative from each team will be given a piece of paper with seven words related to a theme or topic (set A for team A and set B for team B). The topic will be read aloud by the instructor.

2. The representative, who will be standing in front of the class, will be given two minutes (or one minute for more proficient students) to get his/her team members to guess all the seven words.

3. One point will be given to the team for each word correctly guessed.

4. The representative should only provide verbal clues and/or use gestures. S/he is not allowed to mention the word, the beginning letter of the word, or the number of letters in the word.

5. The representative must begin his/her clues by mentioning the word number that s/he is attempting. (Example: "Word number 5. This word means 'not enough.' You know, when you don't have enough water you can also say there is a . . . of water.")

6. If the team cannot guess the word or if the representative does not know the meaning of the word, s/he can say "Pass" and go on to the next word. S/he can return to a word that has been "passed" if there is still time.

7. The opposing team must keep quiet while the other team is guessing. However, the opposing team will be given a chance to guess those words that the other team could not when the time is up. The (opposing) team will win one point for each word it can guess. (At the end of the two minutes the instructor will mention the word number that was wrongly guessed so that the opposing team can attempt its own guess. S/he can repeat one or two clues given earlier but should not provide new clues, as this would give the opposing team an added advantage. The team is given only one chance to provide the right answer.)

The game, besides generating excitement and fun, serves to activate existing schema and words related to the schema. It does more than review the seven words in the list. As students give "wrong" guesses, they are actually activating other words related to the topic, thereby refining their semantic network for that topic. The representative giving the clues also gains a lot of practice in making sentences with the word ("I need a drink. I'm very . . ." [thirsty]), defining its meaning ("This word means . . ."), and providing synonyms ("Another word for . . . ").

The activities above have one thing in common: they focus on the process of vocabulary development (in this case, the discussion leading to the answer) rather than the product or answer itself. The emphasis is on the building up and reinforcement of a semantic network of interrelated words and facilitating automatic lexical access. It should, however, be pointed out that these are just some examples of how the ESL reading instructor can consciously develop his/her learners' vocabulary to improve reading comprehension. They are not meant to form the central part of a reading programme, for nothing can be more effective in developing reading ability than reading itself.

Conclusion

I have attempted to show how theory can be translated into classroom practice in teaching reading vocabulary. There are certainly many more vocabulary activities based on sound theories and research. It is important for the ESL reading instructor to be able to see beyond such activities and recognize their theoretical underpinnings. Only then will s/he be able to evolve a coherent and consistent methodology in teaching vocabulary that is derived from theory and research. Behind every good method there is a good theory, and with practice informed by theory, hopefully, the ESL classroom will become a more effective place for language learning and teaching.

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